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Application No. 10/627,251 Preliminary Amendment

Amendments to the Specification:

Please amend the paragraph at page 1, lines 2-4 as follows:

This application claims the benefit of Japanese

Application No. 2002-173320 filed in Japan on June 13, 2002,
the entire contents of which are incorporated herein by this reference.

Please amend the paragraph on page 2, lines 9-15 as follows:

Referring to Fig. 17, an optical switch 200 comprises input optical fibers 212, input lenses 214, a first MEMS mirror array 218, a second MEMS mirror array 222, output lenses 226, and output optical fibers 228. In this case, to simplify the description, four input optical fibers 212a to 212d and output lenses fibers 228a to 228d are illustrated as the input optical fibers 212 and the output optical fibers 228.

Please amend the paragraph on page 18, lines 5-24 as follows:

Referring to Fig. 5, the processing circuit comprises: a current-voltage converting circuit 88a for capturing and. converting a detection signal supplied from a PD 79a of the PD 79 into a voltage, a current-voltage converting circuit 88b for capturing and converting a detection signal generated from a PD 79b into a voltage, the PDa and PDb obtained by dividing the PD 79 into two segments; an adding circuit 89a for summing output voltages Ea and Eb supplied from the current-voltage converting circuits 88a and 88b; and a subtracting circuit 89b for obtaining a difference between the output voltages Ea and Eb supplied from the current-voltage converting circuits 88a and 88b. The adding circuit 89a can provide an addition output (Ea + Eb). The subtracting circuit 89b can provide a subtraction output (Ea - Eb). On the basis of the addition output; and the subtraction output, $X = (Ea - \frac{Ed}{Eb})/(Ea + \frac{Ed}{Eb})$ is calculated. Thus, an angle signal normalized on the basis of the amount of light is obtained. The inclination of each of the mirror surfaces 80a to 80d can be detected using the normalized angle signal.

Please amend the paragraph at page 29, line 25 to page 30, line 16 as follows:

In this instance, the beam generated from the input optical fiber 3b is incident on the photo-sensor element 11<u>Bb</u> Detection signals obtained through the photo-sensor element 118b are supplied to the control means 19. Thus, the control means 19 performs the following control. In other words, the control means 19 supplies currents to the respective coils 83 of the second galvo units 7A and 7B and the coil 95 of the galvanometer mirror 92 of the first galvo unit 9 so that values indicating the position in the X and Y axes obtained through the photo-sensor element 11B 11b correspond to the optimum values stored, thus fine adjusting the angles of the galvanometer mirrors 72a and 92. To keep the respective angles of the galvanometer mirrors 72 and 92 in this state, the above-mentioned galvanometer mirror control system (not shown) controls the respective mirrors so as to keep outputs of the angle detector elements provided for the respective mirrors.

Please amend the paragraph at page 35, lines 8-15 as follows:

Additionally, in the optical switch 1 according to the first embodiment of the present invention, the common mirror plate 70 (or the mirror plate 90) is etched, thus easily forming the galvanometer mirrors 72a to 72d (or the galvanometer mirrors 92a to 92d) serving as rotatable components simultaneously with the respective supporting members. Mirrors 65 can also be formed with a desired pitch. Thus, small galvanometer mirrors can be formed with low cost.

Please amend the paragraph at page 43, lines 4-7 as follows:

The output optical fiber 17A 17 can also be adjusted along the optical axis with respect to the attachment hole 100b so that the focal point of light on the output optical fiber 17 is optimized through the output-side lens 15A.